

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

IN THE CLAIMS:

Please add claims 25-34 as follows:

1. (Previously Presented) A method for one-piece injection moulding of a soft needle catheter having a hub and a tube-shaped flexible part both formed by said one-piece injection moulding, comprising the steps of:

feeding a molten polymer into a mould having a core which is used to form an interior of said catheter, the mould and the core together defining a hub cavity to form said hub and a tube-shaped cavity to form said tube-shaped flexible part;

said feeding step including using a core having a cone-shaped part that extends from the hub cavity into the tube-shaped cavity and a cylindrical part extending from a distal end of said cone-shaped part to create within said tube-shaped cavity a tube-shaped flexible part having a cylindrical portion formed distal from said hub and a cone-shaped portion extending between said hub cavity and said cylindrical portion;

removing the core from the catheter when the polymer has been sufficiently cured for the core to be removed; and

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removing the one-piece injection moulded soft needle catheter from the mould when the polymer has been sufficiently cured to be removed.

2. (Previously Presented) The method according to claim 1, wherein the catheter is cured to its final state in the mould.

3. (Previously Presented) The method according to claim 1, wherein the molten polymer is supplied to the mould via at least two inlets.

4. (Previously Presented) The method according to claim 3, wherein the inlets are placed at the hub forming part of the mould.

5. (Previously Presented) The method according to claim 1, wherein the mould separates along the axis of the tube-shaped part.

6. (Previously Presented) The method according to claim 1, wherein the mould separates perpendicular to the tube-shaped part and at or just below the hub.

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7. (Previously Presented) The method according to claim 1, wherein the polymer is chosen from the group consisting of polyester ethers, styrene based TPE, olefin based TPE, urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

8. (Previously Presented) The method according to claim 1, wherein the polymer is selected from the group consisting of polypropylene, thermoplastic elastomers, mixtures of thermoplastic elastomers and polypropylene, low density polyethylenes, and thermoplastic polyurethane elastomers.

9. (Previously Presented) The method according to claim 1, wherein the polymer has a shore between 40 and 60D.

10. (Previously Presented) The method according to claim 1, wherein more than one polymer is used in the method.

Claims 11-23 (Canceled).

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24. (Previously Presented) The method according to claim 3, wherein the inlets are placed symmetrically around an axis of the core.

25. (New) A method for one-piece injection moulding of a soft needle catheter having a hub and a tube-shaped flexible part both formed by said one-piece injection moulding, comprising the steps of:

feeding a molten polymer into a mould having a core which is used to form an interior of said catheter, the mould and the core together defining a hub cavity to form said hub and a tube-shaped cavity to form said tube-shaped flexible part;

said feeding step including using a core having a cone-shaped part that extends from the hub cavity into the tube-shaped cavity and a cylindrical part extending from a distal end of said cone-shaped part to a distal tip of said catheter to create within said tube-shaped cavity, in a single moulding step, a tube-shaped flexible part having a cylindrical portion formed distal from said hub and extending to said distal tip and a cone-shaped portion extending between said hub cavity and said cylindrical portion;

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removing the core from the catheter when the polymer has been sufficiently cured for the core to be removed; and

removing the one-piece injection moulded soft needle catheter from the mould when the polymer has been sufficiently cured to be removed.

26. (New) The method according to claim 25, wherein the catheter is cured to its final state in the mould.

27. (New) The method according to claim 25, wherein the molten polymer is supplied to the mould via at least two inlets.

28. (New) The method according to claim 27, wherein the inlets are placed at the hub forming part of the mould.

29. (New) The method according to claim 25, wherein the mould separates along the axis of the tube-shaped part.

30. (New) The method according to claim 25, wherein the mould separates perpendicular to the tube-shaped part and at or just below the hub.

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31. (New) The method according to claim 25, wherein the polymer is chosen from the group consisting of polyester ethers, styrene based TPE, olefin based TPE, urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

32. (New) The method according to claim 25, wherein the polymer is selected from the group consisting of polypropylene, thermoplastic elastomers, mixtures of thermoplastic elastomers and polypropylene, low density polyethylenes, and thermoplastic polyurethane elastomers.

33. (New) The method according to claim 25, wherein the polymer has a shore between 40 and 60D.

34. (New) The method according to claim 25, wherein more than one polymer is used in the method.